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PAYING FARMERS FOR BIODIVERSITY CONSERVATION SERVICES

Ecosystems can be managed to provide a wide range of goods and services that are beneficial to people. Farmers are the largest group of ecosystem managers on earth. They manage agricultural ecosystems to provide marketed products such as food, fibre and fuel. Services such as biodiversity conservation and climate change mitigation can also be provided from agricultural ecosystems, however farmers lack incentives to do so.

Paying farmers for environmental services (PES) is one way of compensating agricultural producers, including farmers, herders, fisherfolk and forest dwellers, for the provision of biodiversity conservation services, including agricultural biodiversity. Payments for biodiversity conservation can take a number of forms, from price premiums for eco-labelled agricultural products, to direct payments for

improving land use. Governments or NGOs are often involved in making payments on behalf of beneficiaries. Global conservation NGOs such as Conservation International, the Nature Conservancy and WWF have been supporting the development of PES, to encourage farmers living in or near

protected areas, buffer zones and biological corridors to adopt improved land management techniques that can reduce negative impacts on biodiversity. The Global Environment Facility is another major supporter. Since 2002, GEF has contributed \$188 million over 22 projects that have some elements of PES. Paying farmers for environmental services is just one of several ways of improving incentives to farmers to provide a wide range of ecosystem services, but it is an important option to consider. PES can be a relatively cheap, effective and equitable means of improving environmental management and conserving biodiversity. It can also be a quick means of responding to some environmental problems, including threats to biodiversity conservation. Farmers can take three types of actions to provide biodiversity conservation services.



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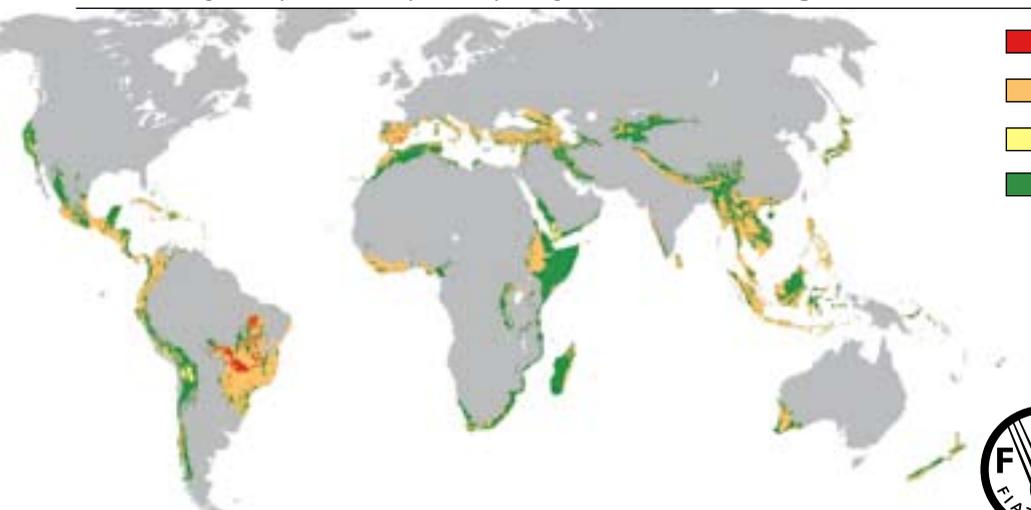


They can change the way they farm, altering the way they till the land, apply fertilizers and pesticides, or changing the mix of crops, varieties and animal breeds used. They can also change land use systems, shifting land from cropping to forests or wetlands to provide habitat and conservation. They may avoid making a land use change, as in choosing not to convert forested uplands to annual crop production. Much of the focus of payments for biodiversity conservation has been on land use change. Recent interest in reducing deforestation and degradation for climate change mitigation is likely to increase payments for avoided land use change. Payments for biodiversity conservation within agricultural systems are relatively rare. One example is being implemented in

Masaa Mara and Kitengela in Kenya, where the private sector and concerned individuals are paying pastoralists to maintain wildlife corridors on their traditional grazing lands. Barriers to the development of payments for biodiversity conservation in developing countries include limited demand and willingness to pay for the service and high transactions costs. The establishment of long term sources of funding for payments, improving information and streamlining institutions is needed to realize the full potential of payments for biodiversity conservation. PES programs can have either positive or negative impacts on the poor. If poor people are small landholders located in areas that have the potential to provide valuable biodiversity conservation services, they could benefit.

PES could also hurt the poor, if they result in loss of access to lands or increased food prices. These are important concerns to take into consideration in designing PES programs. The best opportunities for achieving biodiversity conservation through PES depend on local agricultural, environmental and socio-economic conditions. For example, some biodiversity-rich areas under threat of conversion to agriculture may actually be poorly suited for crop production. Compensating farmers to avoid farming these areas may be relatively low cost. The map below showing the suitability of biodiversity-rich lands for rainfed cropping gives a rough idea of where some of these areas may lie, although more detailed analyses are required to make any firm conclusions.

Biodiversity hotspots in croplands poorly suited to rainfed agriculture



- Biodiversity hotspots in croplands with low agricultural suitability
- Biodiversity hotspots in other croplands
- Biodiversity hotspots in other areas with low agricultural suitability
- Other biodiversity hotspots

Learn more:
http://www.fao.org/es/esa/en/pubs_sofa.htm

(Paying farmers to conserve biodiversity, and other environmental services is explored in greater depth in **The FAO State of Food and Agriculture Report 2007**)



Further information about the work of FAO on biodiversity is available at:
www.fao.org/biodiversity

Note: available at: http://www.fao.org/geonetwork/srv/en/google.kml?id=5&layers=biodiversity_hotspots - Source: SOFA 2007